

LISTING OF CLAIMS:

1. (CURRENTLY AMENDED) A method for manufacturing MTJ cell of magnetic random access memory (MRAM) comprising:
 - forming a stacked structure of a pinned magnetic layer, an alumina layer and a free magnetic layer;
 - forming a hard mask layer on the stacked structure;
 - patterning the hard mask layer via a photoetching process using a MTJ cell mask to form a hard mask layer pattern exposing a portion of the free magnetic layer;
 - subjecting the exposed portion of the free magnetic layer to a halo ion implant process to convert the state of the exposed portion into an amorphous state;
 - oxidizing the exposed portion of the free magnetic layer in the amorphous state; and
 - patterning a MTJ cell by etching the stacked structure.
2. (ORIGINAL) The method according to claim 1, wherein the halo ion implant process is performed in a manner that a tilt angle ranges from 0 to 90 and an ion is implanted from four directions.